

REMARKS

Applicants have carefully reviewed and considered the Office Action mailed on March 26, 2004, and the references cited therewith.

Claims 1, 5, 11, 16, 22, 31, and 33 are amended, and claims 34-41 are added; as a result, claims 1-41 are now pending in this application. The amendments to claims 1, 11, 22 are supported on page 5 line 14, and page 14 lines 1-20. The amendments to claim 5 and 16 are supported on Figure 14A. Claims 34-39 are supported by original claim 23.

§ 103 Rejection of the Claims

Claims 1, 3-9, 13-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tuttle et al. (USPN 6,078,791) with a view of Kwak et al. (USPN 6,280,875). Applicants respectfully traverse. Applicants believe that Kwak et al., having a filing date of March 24, 1999, is unavailable for use as a reference against the present claims, since the present application claims priority to U.S. Provisional Application 60/191,774, filed March 24, 2000. U.S. Provisional Application 60/191,774, on its page 22, describes applications for its thin-film rechargeable batteries including implantable medical devices, remote sensors, miniature transmitters, smart cards, and MEMS devices. U.S. Provisional Application 60/191,774, on its page 25, describes the general layout and stacking order of its component films, including a thin-film cathode, anode, and an electrolyte film separating them. Since Kwak is not more than one year before the filing date of the provisional, and the provisional describes the devices and methods of the present claims, Applicants believe Kwak should be removed as a reference.

Even if Kwak is not removed as a reference, in reference to Examiner's section 1 in the Office Action, claim 1 is amended to point out the battery as thin films deposited successively on the conductive layer, in contrast to the description in Tuttle (column 9, lines 11-18), which says

“Referring now to FIG. 6B, a thin film battery consisting of parallel plates 84 and 86 is **placed** on base layer 78. Next, a capacitor comprising parallel plates 90 and 92 is **attached** onto battery layer 84 **using a conductive epoxy**. Bottom plate 92 of capacitor 62 is somewhat larger in lateral extent than top capacitor plate 90 in order to facilitate the necessary electrical connection of battery 60 and capacitor 62 to integrated circuit 96.”

Thus, Tuttle forms the battery and capacitor and places or epoxies these devices on its substrate.

Further, Tuttle (column 9, lines 37-48), says

“Referring now to FIG. 6D, a **conductive polymer material 108 is deposited in openings 102 and 104** in the lower regions of layer 100 and extended up into the upper openings 110 and 112 of layer 100 to make electrical contact as indicated on the upper surface of IC 96. The shaped conductive epoxy material 108 may also be preformed utilizing a stamping tool or silk screening techniques and is applied as shown over the upper surface of layer 100.”

Thus, even though some layers in Tuttle are deposited as thin films, the battery and capacitor are not, and Tuttle does not suggest this.

In contrast, the present invention as claimed has each of the anode, electrolyte, and cathode component layers of the battery successively deposited as successive thin-film depositions. This distinguishes over the cited references. Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

Further, regarding claims 5 and 16, the Examiner argues that since Tuttle describes

“Accordingly, an enclosed electrical assembly of the present invention includes: a rigid or flexible thin film support member having an integrated circuit (IC) disposed thereon and an antenna incorporated within the IC or positioned adjacent to the IC within a predetermined area of the thin support member; means on the IC for receiving and encoding data relating to the article being stored or shipped; and means on the IC for reading the stored data and transmitting this data to an operator at a remote location.”

that it is inherent that the flexible support member would inherently bend to match a curved shape. Applicants respectfully traverse. The reference says the support member can be flexible, not that the resulting structure is or could be curved with the battery on the concave face. The battery and IC of Tuttle is shown as a flat planar structure. The present claims 5 and 16 are amended to further point out this distinction recite “a curved shape having a convex face and an opposing concave face, and the battery is curved and located on the concave face.” Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

Further, regarding claims 6-8 and 17-19, the Examiner argues that since Tuttle describes

“For example, various modifications and changes may be made in the antenna configurations, battery arrangements (such as battery stacking), device materials, device fabrication steps, and the functional block diagrams without departing from the scope of this invention. The various off-chip components such as the antenna, battery, and

capacitor are manufactured on-chip in alternate and equivalent embodiments. As a second example, the antenna in another alternate and equivalent embodiment is formed on the outer surface or within the outer film. In such an arrangement, coupling to the antenna is through the capacitance of the outer film as a dielectric.”

that it would have been obvious to deposit the antenna on the battery. Applicants respectfully traverse. The reference says the antenna could be formed on the outer surface, not on the battery. It is impermissible for the Examiner to use hindsight gained from the present invention to extend Tuttle’s ephemeral alternatives that do not even say place the antenna on the battery to include the recited combinations of claims 6 and 17 including the limitations of the independent claims 1 and 11.

Regarding claims 7-8 and 18-19, these claims must be considered as a whole, including the base limitations of the independent claims, and appear to be allowable for the reasons argued above for the independent claims. Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

Regarding claims 9 and 20, the Examiner argues that Figure 9 of Tuttle (which shows a “battery-less device environment, since it contains no battery therein”-column 10 line 43) somehow teaches recharging “the battery.” Applicants respectfully traverse. Tuttle describes only a capacitor that is periodically charged by conventional RF charging circuits. This capacitor charge is not charge on a battery. Further, these claims must be considered as a whole, including the base limitations of the independent claims, and also appear to be allowable for the reasons argued above for the independent claims. Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

Claims 2, 12, 21-26 and 31-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tuttle et al. (USPN 6,078,791) and Kwak et al. (USPN 6,280,875) with a view to Little (USPN 4,740,431). Applicants respectfully traverse. Even if Kwak was available to modify Tuttle, and Little were also combined, the result does not provide the claim as a whole including the limitations of the parent claims. These claims must be considered as a whole, including the base limitations of the independent claims, and also appear to be allowable for the reasons argued above for the independent claims. Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

In reference to Examiner's section 2 of the Office Action, regarding claims 21 and 26, Tuttle's passive device refers to a battery-less device, not one that is recharged. The main thrust of Tuttle's device of, e.g., Figures 5A and 6B is a capacitor stacked on a battery, such that when current requirements exceed the current available from the battery, the capacitor supplements the current (column 8 lines 43-45). Figure 9 and column 10 lines 37-48 do not teach charging a battery, but instead teach away by eliminating the battery and running the circuit from the capacitor alone. Contrary to the assertion by the Examiner, there is no indication in Tuttle that received energy could or would be used to charge a battery. Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

Regarding claims 23-25, these claims must be considered as a whole, including the base limitations of the independent claims, and also appear to be allowable for the reasons argued above for the independent claims. Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

Regarding claim 32, Applicants cannot find in the cited references the combined claim as a whole, including an implantable medical device having a communications circuit, antenna, recharging circuit, etc. Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

Regarding claim 31 and claim 33, these have been amended to be in independent form and to specifically call out hearing-aid circuit and timepiece circuit, respectively, rather than the more generic "communications circuit." These amended claims appear to distinguish over the cited references. Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

Claims 27-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tuttle et al. (USPN 6,078,791), Kwak et al. (USPN 6,280,875) and Little (USPN 4,740,431) and further in view to Lew et al. (USPN 6,608,464). Regarding claims 27 and 29, these claims must be considered as a whole, including the base limitations of the independent claims, and also appear to be allowable for the reasons argued above for the independent claims. Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

Regarding claims 28 and 30, the Examiner provides no reference to an acoustic transducer, but instead states that Low teaches a variety of sources. Applicants respectfully traverse. Applicants respectfully request under MPEP 2144 that the Examiner provide a reference in support of this rejection. Without such a showing for a *prima facie* case of obviousness, the claims appear to be in condition for allowance. Accordingly, reconsideration and withdrawal of the rejection, and an early indication of allowance is respectfully requested.

Information Disclosure Statements

Applicants previously submitted an IDS and additional Supplemental Information Disclosure Statements. Applicants respectfully request that Examiner-initialed copies of the below noted E-filed Information Disclosure Statements be returned to Applicants' Representatives to indicate that the cited references have been considered by the Examiner.

An E-filed Information Disclosure Statement was filed on April 11, 2003, citing 30 *US Patent Documents*. An examiner-initialed Form 1449 copy is respectfully requested with the next communication.

An E-filed Information Disclosure Statement was also filed on June 9, 2003, citing 62 *US Patent Documents*. An examiner-initialed Form 1449 copy is respectfully requested with the next communication.

Conclusion

Applicants respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney (952-278-3501) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 502931

Respectfully submitted,

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By their Representatives,

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27 September 2004

By

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CERTIFICATE UNDER 37 CFR § 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelop addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 27th day of September, 2004.

Name: Charles A. Lemaire

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